

Nancy Kleckner

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54
papers

4,712
citations

26
h-index

57
g-index

57
ext. papers

5,799
ext. citations

17.4
avg, IF

5.87
L-index

#	Paper	IF	Citations
54	Meiosis-specific DNA double-strand breaks are catalyzed by Spo11, a member of a widely conserved protein family. <i>Cell</i> , 1997 , 88, 375-84	56.2	1316
53	Crossover/noncrossover differentiation, synaptonemal complex formation, and regulatory surveillance at the leptotene/zygotene transition of meiosis. <i>Cell</i> , 2004 , 117, 29-45	56.2	531
52	Recombination, Pairing, and Synapsis of Homologs during Meiosis. <i>Cold Spring Harbor Perspectives in Biology</i> , 2015 , 7,	10.2	385
51	Physical and functional interactions among basic chromosome organizational features govern early steps of meiotic chiasma formation. <i>Cell</i> , 2002 , 111, 791-802	56.2	279
50	A mechanical basis for chromosome function. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004 , 101, 12592-7	11.5	239
49	Chiasma formation: chromatin/axis interplay and the role(s) of the synaptonemal complex. <i>Chromosoma</i> , 2006 , 115, 175-94	2.8	229
48	<i>Saccharomyces cerevisiae</i> recA homologues RAD51 and DMC1 have both distinct and overlapping roles in meiotic recombination. <i>Genes To Cells</i> , 1997 , 2, 615-29	2.3	154
47	Recombination proteins mediate meiotic spatial chromosome organization and pairing. <i>Cell</i> , 2010 , 141, 94-106	56.2	111
46	Topoisomerase II mediates meiotic crossover interference. <i>Nature</i> , 2014 , 511, 551-6	50.4	110
45	Coordinate variation in meiotic pachytene SC length and total crossover/chiasma frequency under conditions of constant DNA length. <i>Trends in Genetics</i> , 2003 , 19, 623-8	8.5	98
44	Meiotic crossover patterns: obligatory crossover, interference and homeostasis in a single process. <i>Cell Cycle</i> , 2015 , 14, 305-14	4.7	86
43	Crossover patterning by the beam-film model: analysis and implications. <i>PLoS Genetics</i> , 2014 , 10, e1004042	4.2	84
42	A few of our favorite things: Pairing, the bouquet, crossover interference and evolution of meiosis. <i>Seminars in Cell and Developmental Biology</i> , 2016 , 54, 135-48	7.5	79
41	Inefficient Crossover Maturation Underlies Elevated Aneuploidy in Human Female Meiosis. <i>Cell</i> , 2017 , 168, 977-989.e17	56.2	77
40	Chromosomes Progress to Metaphase in Multiple Discrete Steps via Global Compaction/Expansion Cycles. <i>Cell</i> , 2015 , 161, 1124-1137	56.2	76
39	Communication between homologous chromosomes: genetic alterations at a nuclease-hypersensitive site can alter mitotic chromatin structure at that site both in cis and in trans. <i>Genes To Cells</i> , 1996 , 1, 475-89	2.3	66
38	The challenge of evolving stable polyploidy: could an increase in "crossover interference distance" play a central role?. <i>Chromosoma</i> , 2016 , 125, 287-300	2.8	63

37	The bacterial nucleoid: nature, dynamics and sister segregation. <i>Current Opinion in Microbiology</i> , 2014 , 22, 127-37	7.9	59
36	Coupling meiotic chromosome axis integrity to recombination. <i>Genes and Development</i> , 2008 , 22, 796-809.	2.6	58
35	Direct recognition of homology between double helices of DNA in <i>Neurospora crassa</i> . <i>Nature Communications</i> , 2014 , 5, 3509	17.4	57
34	E3 ligase Hei10: a multifaceted structure-based signaling molecule with roles within and beyond meiosis. <i>Genes and Development</i> , 2014 , 28, 1111-23	12.6	53
33	Meiotic recombination-related DNA synthesis and its implications for cross-over and non-cross-over recombinant formation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007 , 104, 5965-70	11.5	49
32	Asy2/Mer2: an evolutionarily conserved mediator of meiotic recombination, pairing, and global chromosome compaction. <i>Genes and Development</i> , 2017 , 31, 1880-1893	12.6	39
31	Per-Nucleus Crossover Covariation and Implications for Evolution. <i>Cell</i> , 2019 , 177, 326-338.e16	56.2	36
30	Meiotic prophase roles of Rec8 in crossover recombination and chromosome structure. <i>Nucleic Acids Research</i> , 2016 , 44, 9296-9314	20.1	32
29	General quantitative relations linking cell growth and the cell cycle in <i>Escherichia coli</i> . <i>Nature Microbiology</i> , 2020 , 5, 995-1001	26.6	25
28	Recombination-independent recognition of DNA homology for repeat-induced point mutation. <i>Current Genetics</i> , 2017 , 63, 389-400	2.9	25
27	DNA sequence homology induces cytosine-to-thymine mutation by a heterochromatin-related pathway in <i>Neurospora</i> . <i>Nature Genetics</i> , 2017 , 49, 887-894	36.3	22
26	Building bridges to move recombination complexes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 12400-12409	11.5	21
25	A rigorous measure of genome-wide genetic shuffling that takes into account crossover positions and Mendel's second law. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 1659-1668	11.5	21
24	Recombination-Independent Recognition of DNA Homology for Repeat-Induced Point Mutation (RIP) Is Modulated by the Underlying Nucleotide Sequence. <i>PLoS Genetics</i> , 2016 , 12, e1006015	6	19
23	Recruitment of Rec8, Pds5 and Rad61/Wapl to meiotic homolog pairing, recombination, axis formation and S-phase. <i>Nucleic Acids Research</i> , 2019 , 47, 11691-11708	20.1	16
22	Crossover Interference, Crossover Maturation, and Human Aneuploidy. <i>BioEssays</i> , 2019 , 41, e1800221	4.1	15
21	Quantitative Modeling and Automated Analysis of Meiotic Recombination. <i>Methods in Molecular Biology</i> , 2017 , 1471, 305-323	1.4	14
20	The 3D Topography of Mitotic Chromosomes. <i>Molecular Cell</i> , 2020 , 79, 902-916.e6	17.6	13

19	Crossover patterns under meiotic chromosome program. <i>Asian Journal of Andrology</i> , 2021 , 23, 562-571	2.8	11
18	MEIOK21: a new component of meiotic recombination bridges required for spermatogenesis. <i>Nucleic Acids Research</i> , 2020 , 48, 6624-6639	20.1	10
17	Interplay between Pds5 and Rec8 in regulating chromosome axis length and crossover frequency. <i>Science Advances</i> , 2021 , 7,	14.3	9
16	Protein-mediated chromosome pairing of repetitive arrays. <i>Journal of Molecular Biology</i> , 2014 , 426, 550-7.5	7.5	8
15	Single-Particle Studies Reveal a Nanoscale Mechanism for Elastic, Bright, and Repeatable ZnS:Mn Mechanoluminescence in a Low-Pressure Regime. <i>ACS Nano</i> , 2021 , 15, 4115-4133	16.7	8
14	Meiotic Chromosome Dynamics 2011 , 487-533		7
13	ESA1 regulates meiotic chromosome axis and crossover frequency via acetylating histone H4. <i>Nucleic Acids Research</i> , 2021 , 49, 9353-9373	20.1	5
12	Questions and Assays. <i>Genetics</i> , 2016 , 204, 1343-1349	4	4
11	Evolution of crossover interference enables stable autoploidy by ensuring pairwise partner connections in <i>Arabidopsis arenosa</i> . <i>Current Biology</i> , 2021 , 31, 4713-4726.e4	6.3	4
10	Mesoscale spatial patterning in the <i>Escherichia coli</i> Min system: reaction-diffusion versus mechanical communication. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 8053-4	11.5	2
9	RNA-DNA hybrids regulate meiotic recombination. <i>Cell Reports</i> , 2021 , 37, 110097	10.6	2
8	Single molecule identification of homology-dependent interactions between long ssRNA and dsDNA. <i>Nucleic Acids Research</i> , 2017 , 45, 894-901	20.1	1
7	Meiotic chromosome organization and crossover patterns.. <i>Biology of Reproduction</i> , 2022 ,	3.9	1
6	Protect chromosomes from end-to-end fusion during meiotic bouquet. <i>Science China Life Sciences</i> , 2018 , 61, 736-738	8.5	0
5	High Temporal Resolution 3D Live-Cell Imaging of Budding Yeast Meiosis Defines Discontinuous Actin/Telomere-Mediated Chromosome Motion, Correlated Nuclear Envelope Deformation and Actin Filament Dynamics.. <i>Frontiers in Cell and Developmental Biology</i> , 2021 , 9, 687132	5.7	0
4	Sister chromatids separate during anaphase in a three-stage program as directed by interaxis bridges.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022 , 119, e2123363119	11.5	0
3	Per-nucleus crossover covariation is regulated by chromosome organization.. <i>IScience</i> , 2022 , 25, 104115	6.1	0
2	The ubiquitin-proteasome system regulates meiotic chromosome organization.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022 , 119, e2106902119	11.5	0

- 1 MEIOK21 regulates oocyte quantity and quality via modulating meiotic recombination.. *FASEB Journal*, **2022**, 36, e22357 0.9